CLAIMS

1. A moving-window, histogram equalization method of processing images, the method comprising:

breaking the image into a plurality of tiles; and

processing each of the plurality of tiles by

obtaining a control parameter;

determining a histogram for one of the plurality of tiles;

determining a concentration ratio for the one of the plurality of tiles;

determining an area of the image that includes the one of the plurality of tiles and information outside the one of the plurality of tiles;

creating a first output by performing a histogram equalization on the area;

creating a second output based on the control parameter and the first output; and

using the second output to process the one of the plurality of tiles.

2. A method as claimed in claim 1, wherein obtaining a control parameter includes obtaining a first control parameter and processing the first control parameter and the concentration ratio to obtain a second control parameter.

3. A method as claimed in claim 1, wherein creating the first output includes creating a first look-up table and creating the second output includes creating a second look-up table.

4. A method as claimed in claim 1, wherein the area includes the one of the plurality of tiles and one or more portions of other tiles in the plurality of tiles.

5. A method as claimed in claim 1, wherein obtaining a first control parameter includes obtaining a control parameter from a user.

6. A method as claimed in claim 1, wherein determining a concentration ratio for the one of the plurality of tiles includes scaling a concentration ratio value.

7. A method as claimed in claim 1, wherein processing the first control parameter and the concentration ratio to obtain a second control parameter includes determining a mathematical root of the group of the first control parameter, the concentration ratio, or both.

8. A method as claimed in claim 1, wherein processing the first control parameter and the concentration ratio to obtain a second control parameter includes multiplying one of the group of the first control parameter, the concentration ratio, or both by a number.

9. A method as claimed in claim 1, wherein processing the first control parameter and the concentration ratio to obtain a second control parameter includes combining the first control parameter and the concentration ratio.

10. A system for processing images using a moving-window, histogram equalization technique, the system comprising:

a processor configured to break an image into a plurality of tiles and process each of the plurality of tiles by

obtaining a first control parameter;

determining a histogram for one of the plurality of tiles;

determining a concentration ratio for the one of the plurality of tiles;

processing the first control parameter and the concentration ratio to obtain a second control parameter;

determining an area of the image that includes the one of the plurality of tiles and information outside the one of the plurality of tiles;

creating a first set of values by performing a histogram equalization on the area;

creating a second set of values based on the second control parameter and the first set of values; and

using the second set of values to process the one of the plurality of tiles.

11. A system as claimed in 10, further comprising a printer coupled to the processor.

12. A system as claimed in claim 10, further comprising an image capture device coupled to the processor.

13. A system as claimed in claim 10, wherein creating the first set of values includes creating a first look-up table and creating the second output includes creating a second look-up table.

14. A system as claimed in claim 10, wherein the area includes the one of the plurality of tiles and one or more portions of other tiles in the plurality of tiles.

15. A system as claimed in claim 10, wherein the system includes an input device and obtaining a first control parameter includes obtaining a control parameter from a user input using the input device.

16. A system as claimed in claim 10, wherein determining a concentration ratio for the one of the plurality of tiles includes scaling a concentration ratio value.

17. A system as claimed in claim 10, wherein processing the first control parameter and the concentration ratio to obtain a second control parameter includes determining a mathematical root of the group of the first control parameter, the concentration ratio, or both.

18. A system as claimed in claim 10, wherein processing the first control parameter and the concentration ratio to obtain a second control parameter includes multiplying one of the group of the first control parameter, the concentration ratio, or both by a number.

19. A system as claimed in claim 10, wherein processing the first control parameter and the concentration ratio to obtain a second control parameter includes combining the first control parameter and the concentration ratio.

20. An image processing system comprising:

an image capture device operable to output an image; and

a controlled, equalization processor coupled to the image capture device, the processor configured to break the image into a plurality of tiles and process each of the plurality of tiles by

determining a concentration ratio for the one of the plurality of tiles;

obtaining a control parameter;

determining an area of the image that includes the one of the plurality of tiles and information outside the one of the one or more tiles;

creating a first output by generating a histogram of the area;

creating a second output based on the control parameter and the first output; and

using the second output to process the one of the plurality of tiles.

21. A system as claimed in claim 20, further comprising a printer coupled to the processor.

22. A system as claimed in claim 20, further comprising an input device coupled to the processor, the input device operable to obtain the control parameter from a user input.

23. A method of processing an image, the method comprising:

capturing an image of an object; and

applying controlled, equalization to an image generated by the image capture device, where the controlled, histogram equalization uses a concentration ratio.

24. A computer-readable medium containing instructions for processing an image by:

breaking the image into a plurality of tiles; and

processing each of the plurality of tiles by

obtaining a control parameter;

determining a histogram for one of the plurality of tiles;

determining a concentration ratio for the one of the plurality of tiles;

determining an area of the image that includes the one of the plurality of tiles and information outside the one of the plurality of tiles;

creating a first output by performing a histogram equalization on the area;

creating a second output based on the control parameter and the first output; and

using the second output to process the one of the plurality of tiles.